

## **Syllabus for Math Tools for Economists II (Econ 1088-001) - Fall 2009**

### **Instructor:**

Rob Tischer

### **Class Meeting Times:**

T TH 3:30pm-4:45pm HUMN 250

### **Final Exam**

Tuesday, December 15, 2009, 1:30pm

### **Office Location:**

Norlin N520 (Norlin Library 5th floor NW Tower)

### **Email:**

robert.tischer\_at\_colorado.edu

This is the best way to contact me, if you won't get a reply within 24 hours please assume that I didn't get your email and resend it.

### **Class Website:**

<http://webfiles.colorado.edu/tische/econ1088/index.html>

This is instructor's web page. Relevant material to the course will be posted here.

[ECON1088 Common Page](#)

This is the web page developed by all Econ 1078 instructors. You can find homework and exam problems from previous semesters there.

### **Office Hours:**

Tuesday 12:35pm-1:35pm

Wednesday 12:35pm-1:35pm

By appointment

### **Course Description and Objectives:**

Continuation of ECON 1078. Teaches mathematical skills for use in economics. Topics include derivatives, optimization, and integration. These skills are used on "real world" problems, and illustrated with computer

assignments. Prereq., ECON 1078 or instructor consent. Similar to MATH 1080, 1081, 1090, 1100, 1300, 1310, and APPM 1350.

### Textbook:

*Essential Mathematics for Economic Analysis*, 3<sup>rd</sup> edition, by Knut Sydsater, and Peter Hammond is required. 1078 adopts the same textbook. This is a very good reference book, which can always help to refresh your knowledge of algebra and calculus.

### Calculator Note:

As this is a course designed to teach mathematical techniques you will need a calculator that can do basic mathematical functions. These include exponentials, logarithms, radicals, and factorials ( $\log$ ,  $\ln$ ,  $e^x$ ,  $\sqrt[n]{x}$  and  $x!$ ). Any basic scientific calculator will perform these functions. While a graphing calculator may be useful in doing some of the homework problems, **you cannot use a graphing calculator on the exam.**

### Grading:

Grades will be determined on the basis of your performance on 5 quizzes, team assignments, 2 midterms, and a final exam. Your lowest quiz grade will be dropped and the others averaged together to obtain your quiz grades. The quiz grade is worth 20% of your over all grade, and the homework assignment grade is worth 20% of your overall grade..

The midterms will be administered on September 24 and November 5 in class. Each test is worth 20% of the course grade. The midterms are not cumulative and will cover only the material since the previous test.

The final exam is scheduled for **December 15<sup>h</sup> (Tue.)** from 1:30pm to 4pm. The final exam is worth 20% of your grade. The final exam will not be cumulative. If you have three final exams scheduled for this day, and this is the last of your exams, you can take the final on another day. Please speak with me as soon as possible if this is the case.

100-93% A	73-76% C
90-92% A-	70-72% C-
87-89% B+	67-69% D+
83-86% B	63-66% D
80-82% B-	60-62% D-
77-79% C+	below 60% F

5 quizzes (Drop the lowest) – 20% of total

Team Assignments - 20% of total

2 Midterms – 40 % (20% each of total)

Final -20% of total

### Make-Up Exams:

There will be NO make-up assignments, quizzes, or exams for this class. If you miss a midterm exam with a documented excuse, the weight given your final exam will be increased.

### Tentative Course Schedule:

Week of	Course Material	Topics	Quiz/Exam
8/24	6.1, 6.2, 6.3	Slopes, Derivatives, Tangents, Increasing/Decreasing Functions	
8/31	6.4, 6.5, 6.6	Rates of Change, Limits, Simple Rules	Quiz 1
9/7	6.7, 6.8, 6.9	Sums, Products, Quotients, Chain Rule, Higher Orders	Team 1
9/14	6.10, 6.11, 7.1	Exponentials, Logarithms, Implicit Differentiation	Quiz 2
9/21	7.2, 7.3 Midterm 1	Examples, Inverse	Midterm 1 (9/24)
9/28	7.4, 7.5, 7.6	Polynomial Approx., Taylor's Formula, Elasticities	Team 2
10/5	7.7, 7.8, 7.9	Elasticities, Continuity, Limits	Quiz 3
10/12	7.10, 7.11, 7.12	Intermediate Value, Infinite Sequences, L'Hopital's	Team 3
10/19	8.1, 8.2, 8.3	Simple Tests, Examples	Quiz 4
10/26	8.4, 8.5, 8.6	Extreme-Value, Examples. Local Extrema	Team 4
11/2	8.7, 9.1 Midterm2	Inflection Points, Indefinite Integrals	Midterm 2 (11/5)
11/9	9.2, 9.3, 9.4	Area and Definite Integrals, Properties, Applications	Team 5
11/16	9.5, 9.6, 9.7	Integration by Parts, Substitution, Infinite Integrals	Team 6
11/23	-	Fall Break (no classes)	
11/30	11.1, 11.2, 11.3	Functions, Partial Derivatives, Geometric Representation	Quiz 5

12/7	11.4, 11.5, 11.6	Surfaces, Functions, Partial Derivatives	-
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**Honor Code:**

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>

**Expectations of Classroom Behavior:**

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which students express opinions. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)

**Absences:**

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please notify me as soon as possible so that the proper arrangements can be made. Students can see full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

**Disabilities Statement:**

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and <http://www.Colorado.EDU/disabilityservices>.

Time extensions for exams must be approved by me prior to the exam. If you have not talked to me personally prior to the exam you will not be granted an extension.

Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. Other letters/requests you may receive from agencies such as the Wardenburg Student Health Center, or other health providers, such as physicians or counselors, are recommendations you may choose to follow to assist students but are not necessarily legal mandates. The syllabus statements and answers to Frequently Asked Questions can be found at <http://www.colorado.edu/disabilityservices>